

REMARKS/ARGUMENTS

The Examiner is thanked for the Office Action mailed October 10, 2007. The status of the application is as follows:

- Claims 1-21 are pending. Claims 1-2 and 4-6 have been amended, claim 3 has been cancelled herein, and claims 10-21 have been added.
- Claim 4 is rejected under 35 U.S.C. 112, second paragraph.
- Claims 1-9 are rejected under 35 U.S.C. 102(b) as being anticipated by Boles et al. ("A Multimode Digital Detector Readout for Solid-State Medical Imaging Detectors," IEEE Journal for Solid-State Circuits, Vol. 33, No. 5 (1998)).
- Claims 1, 2, 4, 5, and 7-9 are rejected under 35 U.S.C. 102(b) as being anticipated by Ribner et al. ("US 5142286).

The rejections are discussed below.

The Rejection of Claim 4 under 35 U.S.C. 112, Second Paragraph

Claim 4 stands rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. More particularly, the Office notes that there is insufficient antecedent basis for the limitation "the detector element" in lines 2 and 3 of claim 4. This rejection should be withdrawn as claim 4 has been amended to cure this minor informality.

The Rejection of Claims 1-9 under 35 U.S.C. 102(b)

Claims 1-9 are rejected under 35 U.S.C. 102(b) as being anticipated by Boles et al. This rejection should be withdrawn because Boles et al. does not teach each and every element as set forth in the subject claims and, therefore, does not anticipate claims 1-9.

A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. *Verdegaal Bros.*

v. *Union Oil Co. of California*, 814 F.2d 628, 631 (Fed.
Cir. 1987).
MPEP §2131.

Independent **claim 1** has been amended to include aspects of claim 3. No new matter has been added, and such an amendment does not necessitate further search. As a consequence of the amendment, claim 3 has been cancelled.

Amended independent claim 1 is directed towards a detector arrangement with a plurality of detector elements. Each of the plurality of detector elements includes an integrated SD modulator, which includes a differential design and a plurality of stages. For each detector element, both the detector element and the corresponding integrated SD modulator reside on a same CMOS semiconductor structure. Boles et al. does not teach each and every one of these claim aspects.

More particularly, at Part II C, first paragraph, Boles et al. discloses interfacing two different components, namely, an IC with the $\Sigma\Delta$ ADC and a detector that detects both x-rays and gamma rays. This is further illustrated in Fig. 1 of Boles et al. in which an output of a detector element of a detector is routed off the detector and to an input, via at least a switch, to a $\Sigma\Delta$ ADC residing on an IC that alternately processes x-rays and gamma rays. As such, Boles et al. does not teach or suggest a same CMOS semiconductor structure with both the detector element and the $\Sigma\Delta$ ADC.

Accordingly, this rejection of claim 1 should be withdrawn.

Claims 2 and 4-9 depend from claim 1 and are allowable at least by virtue of their dependencies.

The Rejection of Claims 1, 2, 4, 5, and 7-9 under 35 U.S.C. 102(b)

Claims 1, 2, 4, 5, and 7-9 stand rejected under 35 U.S.C. 102(b) as being anticipated by Ribner et al. This rejection should be withdrawn because Ribner et al. does not teach each and every element as set forth in the subject claims and, therefore, does not anticipate claims 1, 2, 4, 5, and 7-9.

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In particular, independent **claim 1** has been amended herein to incorporate aspects of claim 3, and the Office has conceded that Ribner et al. does not teach or suggest claim 3. Therefore, this rejection is moot.

Claims 2, 4, 5, and 7-9 depend from claim 1 and are allowable at least by virtue of their dependencies.

New Claims 10-21

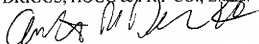
Newly added claims 10-21 emphasize various aspects. No new matter has been added. Entry and allowance of claims 10-21 is respectfully requested.

Conclusion

In view of the foregoing, it is submitted that the claims distinguish patentably and non-obviously over the prior art of record. An early indication of allowability is earnestly solicited.

Respectfully submitted,

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